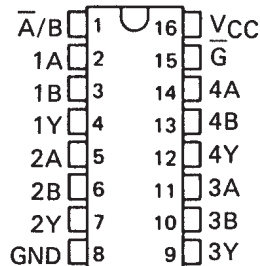


# SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

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- Three-State Outputs Interface Directly with System Bus
- 'LS257B and 'LS258B Offer Three Times the Sink-Current Capability of the Original 'LS257 and 'LS258
- Same Pin Assignments as SN54LS157, SN74LS157, SN54S157, SN74S157, and SN54LS158, SN74LS158, SN54S158, SN74S158
- Provides Bus Interface from Multiple Sources in High-Performance Systems

SN54LS257B, SN54S257,  
SN54LS258B, SN54S258 . . . J OR W PACKAGE  
SN74LS257B, SN74S257,  
SN74LS258B, SN74S258 . . . D OR N PACKAGE  
(TOP VIEW)



|         | AVERAGE PROPAGATION<br>DELAY FROM<br>DATA INPUT | TYPICAL<br>POWER<br>DISSIPATION† |
|---------|---|----------------------------------|
| 'LS257B | 9 ns  | 55 mW                            |
| 'LS258B | 9 ns  | 55 mW                            |
| 'S257   | 4.8 ns  | 320 mW                           |
| 'S258   | 4 ns  | 280 mW                           |

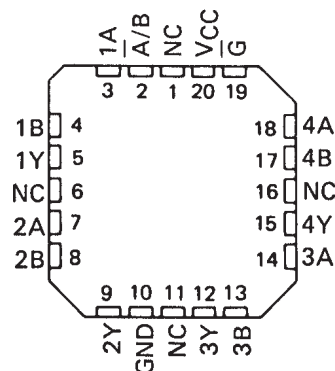
† Off state (worst case)

## description

These devices are designed to multiplex signals from four-bit data sources to four-output data lines in bus-organized systems. The 3-state outputs will not load the data lines when the output control pin ( $\bar{G}$ ) is at a high-logic level.

Series 54LS and 54S are characterized for operation over the full military temperature range of  $-55^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ ; Series 74LS and 74S are characterized for operation from  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ .

SN54LS257B, SN54S257,  
SN54LS258B, SN54S258 . . . FK PACKAGE  
(TOP VIEW)



NC-No internal connection.

FUNCTION TABLE

| OUTPUT CONTROL | INPUTS |   | OUTPUT Y |                  |                  |
|----------------|--------|---|----------|------------------|------------------|
|                | SELECT | A | B        | 'LS257B<br>'S257 | 'LS258B<br>'S258 |
| H              | X      | X | X        | Z                | Z                |
| L              | L      | L | X        | L                | H                |
| L              | L      | H | X        | H                | L                |
| L              | H      | X | L        | L                | H                |
| L              | H      | X | H        | H                | L                |

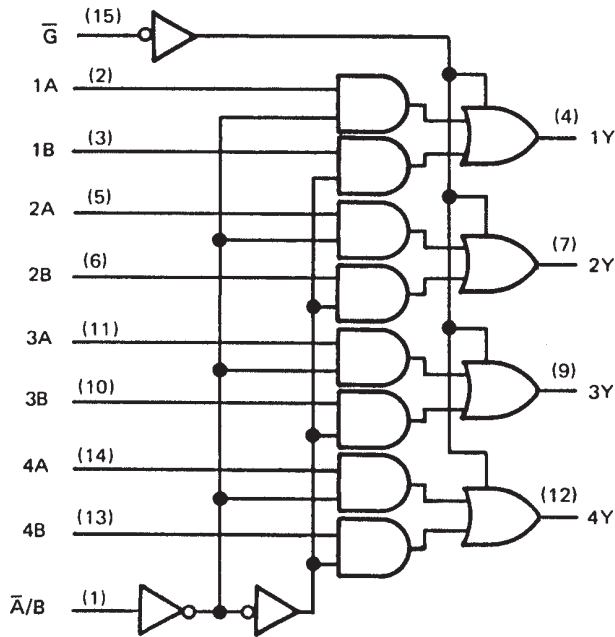
H = high level, L = low level, X = irrelevant,  
Z = high impedance (off)

SN54LS257B, SN54LS258B, SN54S257, SN54S258  
 SN74LS257B, SN74LS258B, SN74S257, SN74S258  
 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

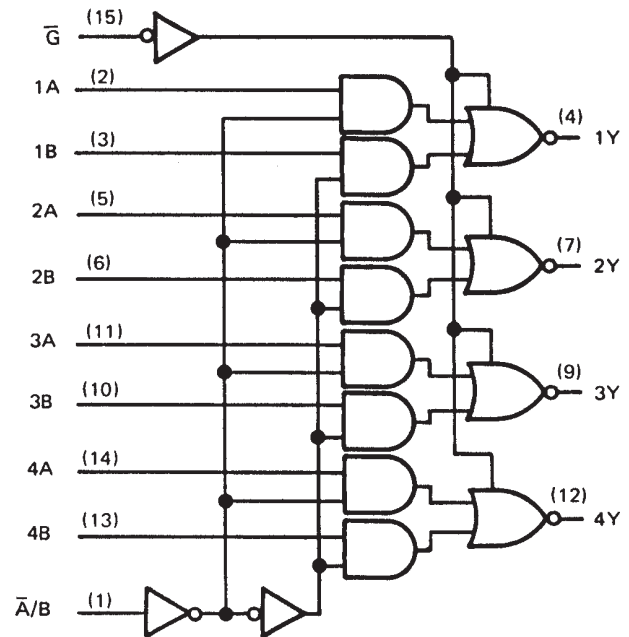
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logic diagrams (positive logic)

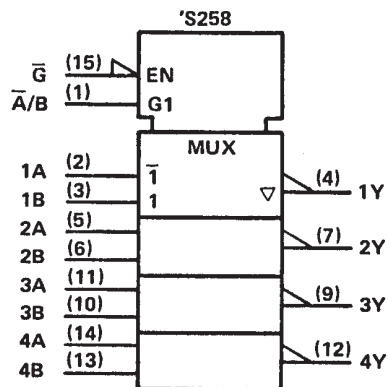
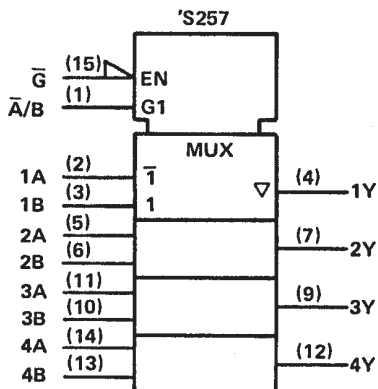
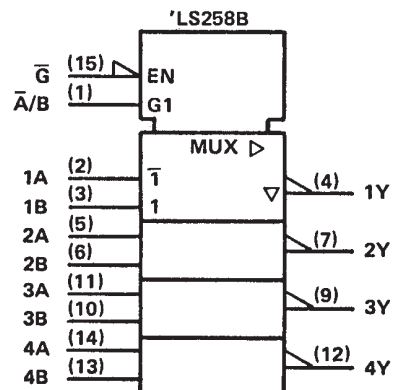
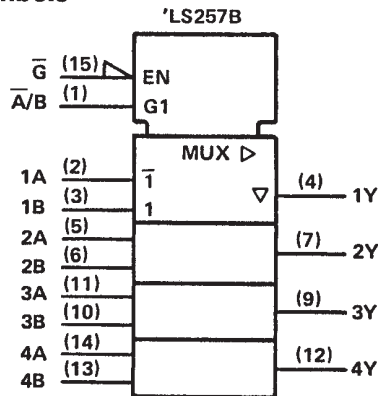
'LS257B, 'S257



'LS258B, 'S258



logic symbols†



†These symbols are in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12. Pin numbers shown are for D, J, N, and W packages.



**SN54LS257B, SN54LS258B, SN54S257, SN54S258  
SN74LS257B, SN74LS258B, SN74S257, SN74S258  
QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS**

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**recommended operating conditions**

|   | SN54LS' |     |     | SN74LS' |     |      | UNIT |
|---|---------|-----|-----|---------|-----|------|------|
|   | MIN     | NOM | MAX | MIN     | NOM | MAX  |      |
| V <sub>CC</sub> Supply voltage                | 4.5     | 5   | 5.5 | 4.75    | 5   | 5.25 | V    |
| V <sub>IH</sub> High-level input voltage      | 2       |     |     | 2       |     |      | V    |
| V <sub>IL</sub> Low-level input voltage       |         |     | 0.7 |         |     | 0.8  | V    |
| I <sub>OH</sub> High-level output current     |         |     | -1  |         |     | -2.6 | mA   |
| I <sub>OL</sub> Low-level output current      |         |     | 12  |         |     | 24   | mA   |
| T <sub>A</sub> Operating free-air temperature | -55     |     | 125 | 0       |     | 70   | °C   |

**electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)**

| PARAMETER         | TEST CONDITIONS†   | SN54LS'                           |      |         | SN74LS' |      |      | UNIT |    |
|-------------------|--|-----------------------------------|------|---------|---------|------|------|------|----|
|                   |  | MIN                               | TYP‡ | MAX     | MIN     | TYP‡ | MAX  |      |    |
| V <sub>IK</sub>   | V <sub>CC</sub> = MIN, I <sub>I</sub> = -18 mA   |                                   |      | -1.5    |         |      | -1.5 | V    |    |
| V <sub>OH</sub>   | V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = MAX, I <sub>OH</sub> = MAX   | 2.4                               | 3.4  |         | 2.4     | 3.1  |      | V    |    |
| V <sub>OL</sub>   | V <sub>CC</sub> = MIN, V <sub>IH</sub> = 2 V, V <sub>IL</sub> = MAX, I <sub>OL</sub> = 12 mA |                                   | 0.25 | 0.4     |         | 0.25 | 0.4  | V    |    |
|                   |  |                                   |      |         |         | 0.35 | 0.5  |      |    |
| I <sub>OZH</sub>  | V <sub>CC</sub> = MAX, V <sub>IH</sub> = 2 V, V <sub>O</sub> = 2.7 V                         |                                   |      | 20      |         |      | 20   | μA   |    |
| I <sub>OZL</sub>  | V <sub>CC</sub> = MAX, V <sub>IH</sub> = 2 V, V <sub>O</sub> = 0.4 V                         |                                   |      | -20     |         |      | -20  | μA   |    |
| I <sub>I</sub>    | V <sub>CC</sub> = MAX, V <sub>I</sub> = 7 V  |                                   |      | 0.1     |         |      | 0.1  | mA   |    |
| I <sub>IH</sub>   | V <sub>CC</sub> = MAX, V <sub>I</sub> = 2.7 V  |                                   |      | 20      |         |      | 20   | μA   |    |
| I <sub>IL</sub>   | V <sub>CC</sub> = MAX, V <sub>I</sub> = 0.4 V  |                                   |      | -0.4    |         |      | -0.4 | mA   |    |
| I <sub>OS</sub> § | V <sub>CC</sub> = MAX,   | -30                               |      | -130    | -30     |      | -130 | mA   |    |
| I <sub>CC</sub>   | All outputs high   | V <sub>CC</sub> = MAX, See Note 2 |      | 'LS257B | 8       | 12   | 8    | 12   | mA |
|                   | All outputs low  |                                   |      |         | 12      | 18   | 12   | 18   |    |
|                   | All outputs off  |                                   |      |         | 13      | 19   | 13   | 19   |    |
|                   | All outputs high   |                                   |      |         | 6       | 9    | 6    | 9    |    |
|                   | All outputs low  |                                   |      |         | 10      | 15   | 10   | 15   |    |
|                   | All outputs off  |                                   |      |         | 11      | 16   | 11   | 16   |    |

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C.

§ Not more than one output should be shorted at a time and duration of the short-circuit should not exceed one second.

NOTE 2: I<sub>CC</sub> is measured with all outputs open and all possible inputs grounded while achieving the stated output conditions.

**switching characteristics, V<sub>CC</sub> = 5 V, T<sub>A</sub> = 25°C, R<sub>L</sub> = 667 Ω**

| PARAMETER¶       | FROM (INPUT)   | TO (OUTPUT) | TEST CONDITIONS                    | 'LS257B |     |     | 'LS258B |     |     | UNIT |
|------------------|----------------|-------------|------------------------------------|---------|-----|-----|---------|-----|-----|------|
|                  |                |             |                                    | MIN     | TYP | MAX | MIN     | TYP | MAX |      |
| t <sub>PLH</sub> | Data           | Any         | C <sub>L</sub> = 45 pF, See Note 3 | 8       | 13  |     | 7       | 12  | ns  |      |
| t <sub>PHL</sub> |                |             |                                    | 10      | 15  |     | 11      | 17  |     |      |
| t <sub>PLH</sub> | Select         | Any         |                                    | 16      | 21  |     | 14      | 21  | ns  |      |
| t <sub>PHL</sub> |                |             |                                    | 17      | 24  |     | 19      | 24  |     |      |
| t <sub>pZH</sub> | Output Control | Any         |                                    | 15      | 30  |     | 15      | 30  | ns  |      |
| t <sub>pZL</sub> |                |             |                                    | 19      | 30  |     | 20      | 30  |     |      |
| t <sub>PHZ</sub> | Output Control | Any         | C <sub>L</sub> = 5 pF, See Note 3  | 18      | 30  |     | 18      | 30  | ns  |      |
| t <sub>PLZ</sub> |                |             | 16                                 | 25      |     | 16  | 25      |     |     |      |

¶ t<sub>PLH</sub> = propagation delay time, low-to-high-level output

t<sub>PHL</sub> = propagation delay time, high-to-low-level output

t<sub>pZH</sub> = output enable time to high level

t<sub>pZL</sub> = output enable time to low level

t<sub>PHZ</sub> = output disable time from high level

t<sub>PLZ</sub> = output disable time from low level

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.



# SN54LS257B, SN54LS258B, SN54S257, SN54S258 SN74LS257B, SN74LS258B, SN74S257, SN74S258 QUADRUPLE 2-LINE TO 1-LINE DATA SELECTORS/MULTIPLEXERS

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## recommended operating conditions

|                                       | SN54S' |     |     | SN74S' |     |      | UNIT |
|---------------------------------------|--------|-----|-----|--------|-----|------|------|
|                                       | MIN    | NOM | MAX | MIN    | NOM | MAX  |      |
| Supply voltage, $V_{CC}$              | 4.5    | 5   | 5.5 | 4.75   | 5   | 5.25 | V    |
| High-level output current, $I_{OH}$   |        |     | -2  |        |     | -6.5 | mA   |
| Low-level output current, $I_{OL}$    |        |     | 20  |        |     | 20   | mA   |
| Operating free-air temperature, $T_A$ | -55    |     | 125 | 0      |     | 70   | °C   |

## electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

| PARAMETER |  | TEST CONDITIONS†  | 'S257    |      |     | 'S258    |      |     | UNIT |
|-----------|--|---|----------|------|-----|----------|------|-----|------|
|           |  |   | MIN      | TYP‡ | MAX | MIN      | TYP‡ | MAX |      |
| $V_{IH}$  | High-level input voltage                             |   | 2        |      |     | 2        |      |     | V    |
| $V_{IL}$  | Low-level input voltage                              |   | 0.8      |      |     | 0.8      |      |     | V    |
| $V_{IK}$  | Input clamp voltage                                  | $V_{CC} = \text{MIN}, I_I = -18 \text{ mA}$   | -1.2     |      |     | -1.2     |      |     | V    |
| $V_{OH}$  | High-level output voltage                            | $V_{CC} = \text{MIN}, V_{IH} = 2 \text{ V}, V_{IL} = 0.8 \text{ V}, I_{OH} = -1 \text{ mA}$ | SN74S'   |      |     | 2.7      |      |     | V    |
|           |  | $V_{CC} = \text{MIN}, V_{IH} = 2 \text{ V}, V_{IL} = 0.8 \text{ V}, I_{OH} = \text{MAX}$    | SN54S'   |      |     | 2.4 3.4  |      |     |      |
|           |  |   | SN74S'   |      |     | 2.4 3.2  |      |     |      |
| $V_{OL}$  | Low-level output voltage                             | $V_{CC} = \text{MIN}, V_{IH} = 2 \text{ V}, V_{IL} = 0.8 \text{ V}, I_{OL} = 20 \text{ mA}$ | 0.5      |      |     | 0.5      |      |     | V    |
| $I_{OZH}$ | Off-state output current, high-level voltage applied | $V_{CC} = \text{MAX}, V_{IH} = 2 \text{ V}, V_O = 2.4 \text{ V}$                            | 50       |      |     | 50       |      |     | μA   |
| $I_{OZL}$ | Off-state output current, low-level voltage applied  | $V_{CC} = \text{MAX}, V_{IH} = 2 \text{ V}, V_O = 0.5 \text{ V}$                            | -50      |      |     | -50      |      |     | μA   |
| $I_I$     | Input current at maximum input voltage               | $V_{CC} = \text{MAX}, V_I = 5.5 \text{ V}$  | 1        |      |     | 1        |      |     | mA   |
| $I_{IH}$  | High-level input current                             | S input   | 100      |      |     | 100      |      |     | μA   |
|           |  | Any other   | 50       |      |     | 50       |      |     |      |
| $I_{IL}$  | Low-level input current                              | S input   | -4       |      |     | -4       |      |     | mA   |
|           |  | Any other   | -2       |      |     | -2       |      |     |      |
| $I_{OS}$  | Short-circuit output current§                        | $V_{CC} = \text{MAX}$   | -40 -100 |      |     | -40 -100 |      |     | mA   |
| $I_{CC}$  | Supply current                                       | All outputs high  | 44 68    |      |     | 36 56    |      |     | mA   |
|           |  | All outputs low   | 60 93    |      |     | 52 81    |      |     |      |
|           |  | All outputs off   | 64 99    |      |     | 56 87    |      |     |      |

† For conditions shown as MIN or MAX, use the appropriate value specified under recommended operating conditions.

‡ All typical values are at  $V_{CC} = 5 \text{ V}, T_A = 25^\circ\text{C}$ .

§ Not more than one output should be shorted at a time and duration of the short-circuit should not exceed one second.

NOTE 2:  $I_{CC}$  is measured with all outputs open and all possible inputs grounded while achieving the stated output conditions.

## switching characteristics, $V_{CC} = 5 \text{ V}, T_A = 25^\circ\text{C}, R_L = 280 \Omega$

| PARAMETER¶ | FROM (INPUT) | TO (OUTPUT) | TEST CONDITIONS                      | 'S257   |     |         | 'S258   |     |     | UNIT |
|------------|--------------|-------------|--------------------------------------|---------|-----|---------|---------|-----|-----|------|
|            |              |             |                                      | MIN     | TYP | MAX     | MIN     | TYP | MAX |      |
| $t_{PLH}$  | Data         | Any         | $C_L = 15 \text{ pF},$<br>See Note 3 | 5 7.5   |     |         | 4 6     |     |     | ns   |
| $t_{PHL}$  |              |             |                                      | 4.5 6.5 |     |         | 4 6     |     |     |      |
| $t_{PLH}$  | Select       | Any         |                                      | 8.5 15  |     |         | 8 12    |     |     | ns   |
| $t_{PHL}$  |              |             |                                      | 8.5 15  |     |         | 7.5 12  |     |     |      |
| $t_{PZH}$  | Output       | Any         |                                      | 13 19.5 |     |         | 13 19.5 |     |     | ns   |
| $t_{PZL}$  | Control      |             |                                      | 14 21   |     |         | 14 21   |     |     |      |
| $t_{PHZ}$  | Output       | Any         | 5.5 8.5                              |         |     | 5.5 8.5 |         |     | ns  |      |
| $t_{PLZ}$  | Control      |             | 9 14                                 |         |     | 9 14    |         |     |     |      |

¶  $f_{\text{max}}$  = Maximum clock frequency

$t_{PLH}$  = propagation delay time, low-to-high-level output

$t_{PHL}$  = propagation delay time, high-to-low-level output

$t_{PZH}$  = output enable time to high level

$t_{PZL}$  = output enable time to low level

$t_{PHZ}$  = output disable time from high level

$t_{PLZ}$  = output disable time from low level

NOTE 3: Load circuits and voltage waveforms are shown in Section 1.



**PACKAGING INFORMATION**

| Orderable part number            | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)       |
|----------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|---------------------------|
| <a href="#">7603701EA</a>        | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701EA<br>SNJ54LS257BJ |
| <a href="#">7603701FA</a>        | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| <a href="#">7603701FA</a>        | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| <a href="#">7603801EA</a>        | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| <a href="#">7603801EA</a>        | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| <a href="#">8002301EA</a>        | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J   |
| <a href="#">8002301EA</a>        | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J   |
| <a href="#">8002301FA</a>        | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W   |
| <a href="#">8002301FA</a>        | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W   |
| <a href="#">JM38510/07906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA      |
| <a href="#">JM38510/07906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA      |
| JM38510/07906BEA.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA      |
| JM38510/07906BEA.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA      |
| <a href="#">JM38510/07906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA      |
| <a href="#">JM38510/07906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA      |
| JM38510/07906BFA.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA      |

| Orderable part number            | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)  |
|----------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|----------------------|
| JM38510/07906BFA.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA |
| <a href="#">JM38510/30906B2A</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| <a href="#">JM38510/30906B2A</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| JM38510/30906B2A.A               | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| JM38510/30906B2A.A               | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| <a href="#">JM38510/30906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| <a href="#">JM38510/30906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| JM38510/30906BEA.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| JM38510/30906BEA.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| <a href="#">JM38510/30906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| <a href="#">JM38510/30906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| JM38510/30906BFA.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| JM38510/30906BFA.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| <a href="#">M38510/07906BEA</a>  | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA |
| <a href="#">M38510/07906BEA</a>  | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BEA |
| <a href="#">M38510/07906BFA</a>  | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA |
| <a href="#">M38510/07906BFA</a>  | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>07906BFA |

| Orderable part number           | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)  |
|---------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|----------------------|
| <a href="#">M38510/30906B2A</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| <a href="#">M38510/30906B2A</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906B2A |
| <a href="#">M38510/30906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| <a href="#">M38510/30906BEA</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BEA |
| <a href="#">M38510/30906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| <a href="#">M38510/30906BFA</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | JM38510/<br>30906BFA |
| <a href="#">SN54LS257BJ</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS257BJ          |
| <a href="#">SN54LS257BJ</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS257BJ          |
| <a href="#">SN54LS257BJ.A</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS257BJ          |
| <a href="#">SN54LS257BJ.A</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS257BJ          |
| <a href="#">SN54LS258BJ</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS258BJ          |
| <a href="#">SN54LS258BJ</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS258BJ          |
| <a href="#">SN54LS258BJ.A</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS258BJ          |
| <a href="#">SN54LS258BJ.A</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54LS258BJ          |
| <a href="#">SN54S257J</a>       | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54S257J            |
| <a href="#">SN54S257J</a>       | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54S257J            |
| <a href="#">SN54S257J.A</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54S257J            |
| <a href="#">SN54S257J.A</a>     | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SN54S257J            |
| <a href="#">SN74LS257BD</a>     | Obsolete      | Production           | SOIC (D)   16  | -                     | -           | Call TI                              | Call TI                           | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BD</a>     | Obsolete      | Production           | SOIC (D)   16  | -                     | -           | Call TI                              | Call TI                           | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BDR</a>    | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BDR</a>    | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BDR.A</a>  | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BDR.A</a>  | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS257B               |
| <a href="#">SN74LS257BN</a>     | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS257BN          |
| <a href="#">SN74LS257BN</a>     | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS257BN          |

| Orderable part number          | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)       |
|--------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|---------------------------|
| SN74LS257BN.A                  | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS257BN               |
| SN74LS257BN.A                  | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS257BN               |
| <a href="#">SN74LS257BNSR</a>  | Active        | Production           | SOP (NS)   16  | 2000   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | 74LS257B                  |
| <a href="#">SN74LS257BNSR</a>  | Active        | Production           | SOP (NS)   16  | 2000   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | 74LS257B                  |
| SN74LS257BNSR.A                | Active        | Production           | SOP (NS)   16  | 2000   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | 74LS257B                  |
| SN74LS257BNSR.A                | Active        | Production           | SOP (NS)   16  | 2000   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | 74LS257B                  |
| <a href="#">SN74LS258BD</a>    | Obsolete      | Production           | SOIC (D)   16  | -                     | -           | Call TI                              | Call TI                           | 0 to 70      | LS258B                    |
| <a href="#">SN74LS258BD</a>    | Obsolete      | Production           | SOIC (D)   16  | -                     | -           | Call TI                              | Call TI                           | 0 to 70      | LS258B                    |
| <a href="#">SN74LS258BDR</a>   | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS258B                    |
| <a href="#">SN74LS258BDR</a>   | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS258B                    |
| SN74LS258BDR.A                 | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS258B                    |
| SN74LS258BDR.A                 | Active        | Production           | SOIC (D)   16  | 2500   LARGE T&R      | Yes         | NIPDAU                               | Level-1-260C-UNLIM                | 0 to 70      | LS258B                    |
| <a href="#">SN74LS258BN</a>    | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS258BN               |
| <a href="#">SN74LS258BN</a>    | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS258BN               |
| SN74LS258BN.A                  | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS258BN               |
| SN74LS258BN.A                  | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74LS258BN               |
| <a href="#">SN74S257N</a>      | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74S257N                 |
| <a href="#">SN74S257N</a>      | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74S257N                 |
| SN74S257N.A                    | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74S257N                 |
| SN74S257N.A                    | Active        | Production           | PDIP (N)   16  | 25   TUBE             | Yes         | NIPDAU                               | N/A for Pkg Type                  | 0 to 70      | SN74S257N                 |
| <a href="#">SNJ54LS257BFBK</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54LS<br>257BFBK        |
| <a href="#">SNJ54LS257BFBK</a> | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54LS<br>257BFBK        |
| SNJ54LS257BFBK.A               | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54LS<br>257BFBK        |
| SNJ54LS257BFBK.A               | Active        | Production           | LCCC (FK)   20 | 55   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54LS<br>257BFBK        |
| <a href="#">SNJ54LS257BJ</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701EA<br>SNJ54LS257BJ |
| <a href="#">SNJ54LS257BJ</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701EA<br>SNJ54LS257BJ |

| Orderable part number        | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)       |
|------------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|---------------------------|
| SNJ54LS257BJ.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701EA<br>SNJ54LS257BJ |
| SNJ54LS257BJ.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701EA<br>SNJ54LS257BJ |
| <a href="#">SNJ54LS257BW</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| <a href="#">SNJ54LS257BW</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| SNJ54LS257BW.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| SNJ54LS257BW.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603701FA<br>SNJ54LS257BW |
| <a href="#">SNJ54LS258BJ</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| <a href="#">SNJ54LS258BJ</a> | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| SNJ54LS258BJ.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| SNJ54LS258BJ.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 7603801EA<br>SNJ54LS258BJ |
| <a href="#">SNJ54S257J</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257J                |
| <a href="#">SNJ54S257J</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257J                |
| SNJ54S257J.A                 | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257J                |
| SNJ54S257J.A                 | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257J                |
| <a href="#">SNJ54S257W</a>   | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257W                |
| <a href="#">SNJ54S257W</a>   | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257W                |
| SNJ54S257W.A                 | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257W                |
| SNJ54S257W.A                 | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | SNJ54S257W                |
| <a href="#">SNJ54S258J</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J   |
| <a href="#">SNJ54S258J</a>   | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J   |
| SNJ54S258J.A                 | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J   |

| Orderable part number      | Status<br>(1) | Material type<br>(2) | Package   Pins | Package qty   Carrier | RoHS<br>(3) | Lead finish/<br>Ball material<br>(4) | MSL rating/<br>Peak reflow<br>(5) | Op temp (°C) | Part marking<br>(6)     |
|----------------------------|---------------|----------------------|----------------|-----------------------|-------------|--------------------------------------|-----------------------------------|--------------|-------------------------|
| SNJ54S258J.A               | Active        | Production           | CDIP (J)   16  | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301EA<br>SNJ54S258J |
| <a href="#">SNJ54S258W</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W |
| <a href="#">SNJ54S258W</a> | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W |
| SNJ54S258W.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W |
| SNJ54S258W.A               | Active        | Production           | CFP (W)   16   | 25   TUBE             | No          | SNPB                                 | N/A for Pkg Type                  | -55 to 125   | 8002301FA<br>SNJ54S258W |

(1) **Status:** For more details on status, see our [product life cycle](#).

(2) **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

(3) **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

(4) **Lead finish/Ball material:** Parts may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

(5) **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

(6) **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "~" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

**Important Information and Disclaimer:** The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

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**OTHER QUALIFIED VERSIONS OF SN54LS257B, SN54LS258B, SN54S257, SN74LS257B, SN74LS258B, SN74S257 :**

- Catalog : [SN74LS257B](#), [SN74LS258B](#), [SN74S257](#)
- Military : [SN54LS257B](#), [SN54LS258B](#), [SN54S257](#)

NOTE: Qualified Version Definitions:

- Catalog - TI's standard catalog product
- Military - QML certified for Military and Defense Applications

**TAPE AND REEL INFORMATION**

**QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE**


\*All dimensions are nominal

| Device        | Package Type | Package Drawing | Pins | SPQ  | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|---------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| SN74LS257BDR  | SOIC         | D               | 16   | 2500 | 330.0              | 16.4               | 6.5     | 10.3    | 2.1     | 8.0     | 16.0   | Q1            |
| SN74LS257BNSR | SOP          | NS              | 16   | 2000 | 330.0              | 16.4               | 8.1     | 10.4    | 2.5     | 12.0    | 16.0   | Q1            |
| SN74LS258BDR  | SOIC         | D               | 16   | 2500 | 330.0              | 16.4               | 6.5     | 10.3    | 2.1     | 8.0     | 16.0   | Q1            |

**TAPE AND REEL BOX DIMENSIONS**


\*All dimensions are nominal

| Device        | Package Type | Package Drawing | Pins | SPQ  | Length (mm) | Width (mm) | Height (mm) |
|---------------|--------------|-----------------|------|------|-------------|------------|-------------|
| SN74LS257BDR  | SOIC         | D               | 16   | 2500 | 340.5       | 336.1      | 32.0        |
| SN74LS257BNSR | SOP          | NS              | 16   | 2000 | 353.0       | 353.0      | 32.0        |
| SN74LS258BDR  | SOIC         | D               | 16   | 2500 | 353.0       | 353.0      | 32.0        |

**TUBE**


\*All dimensions are nominal



| Device             | Package Name | Package Type | Pins | SPQ | L (mm) | W (mm) | T (µm) | B (mm) |
|--------------------|--------------|--------------|------|-----|--------|--------|--------|--------|
| 7603701FA          | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| JM38510/07906BFA   | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| JM38510/07906BFA.A | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| JM38510/30906B2A   | FK           | LCCC         | 20   | 55  | 506.98 | 12.06  | 2030   | NA     |
| JM38510/30906B2A.A | FK           | LCCC         | 20   | 55  | 506.98 | 12.06  | 2030   | NA     |
| JM38510/30906BFA   | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| JM38510/30906BFA.A | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| M38510/07906BFA    | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| M38510/30906B2A    | FK           | LCCC         | 20   | 55  | 506.98 | 12.06  | 2030   | NA     |
| M38510/30906BFA    | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| SN74LS257BN        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS257BN        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS257BN.A      | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS257BN.A      | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS258BN        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS258BN        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS258BN.A      | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74LS258BN.A      | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74S257N          | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74S257N          | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74S257N.A        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SN74S257N.A        | N            | PDIP         | 16   | 25  | 506    | 13.97  | 11230  | 4.32   |
| SNJ54LS257BFB      | FK           | LCCC         | 20   | 55  | 506.98 | 12.06  | 2030   | NA     |
| SNJ54LS257BFB.A    | FK           | LCCC         | 20   | 55  | 506.98 | 12.06  | 2030   | NA     |
| SNJ54LS257BW       | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |
| SNJ54LS257BW.A     | W            | CFP          | 16   | 25  | 506.98 | 26.16  | 6220   | NA     |

D (R-PDSO-G16)

PLASTIC SMALL OUTLINE



4040047-6/M 06/11

- NOTES:
- A. All linear dimensions are in inches (millimeters).
  - B. This drawing is subject to change without notice.
  -  C. Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.006 (0,15) each side.
  -  D. Body width does not include interlead flash. Interlead flash shall not exceed 0.017 (0,43) each side.
  - E. Reference JEDEC MS-012 variation AC.

W (R-GDFP-F16)

CERAMIC DUAL FLATPACK



- NOTES:
- A. All linear dimensions are in inches (millimeters).
  - B. This drawing is subject to change without notice.
  - C. This package can be hermetically sealed with a ceramic lid using glass frit.
  - D. Index point is provided on cap for terminal identification only.
  - E. Falls within MIL STD 1835 GDFP2-F16

## GENERIC PACKAGE VIEW

**FK 20**

**LCCC - 2.03 mm max height**

8.89 x 8.89, 1.27 mm pitch

LEADLESS CERAMIC CHIP CARRIER

This image is a representation of the package family, actual package may vary.  
Refer to the product data sheet for package details.



4229370VA\

J (R-GDIP-T\*\*)

14 LEADS SHOWN

CERAMIC DUAL IN-LINE PACKAGE



| DIM \ PINS ** | 14                     | 16                     | 18                     | 20                     |
|---------------|------------------------|------------------------|------------------------|------------------------|
| A             | 0.300<br>(7,62)<br>BSC | 0.300<br>(7,62)<br>BSC | 0.300<br>(7,62)<br>BSC | 0.300<br>(7,62)<br>BSC |
| B MAX         | 0.785<br>(19,94)       | .840<br>(21,34)        | 0.960<br>(24,38)       | 1.060<br>(26,92)       |
| B MIN         | —                      | —                      | —                      | —                      |
| C MAX         | 0.300<br>(7,62)        | 0.300<br>(7,62)        | 0.310<br>(7,87)        | 0.300<br>(7,62)        |
| C MIN         | 0.245<br>(6,22)        | 0.245<br>(6,22)        | 0.220<br>(5,59)        | 0.245<br>(6,22)        |



4040083/F 03/03

- NOTES:
- All linear dimensions are in inches (millimeters).
  - This drawing is subject to change without notice.
  - This package is hermetically sealed with a ceramic lid using glass frit.
  - Index point is provided on cap for terminal identification only on press ceramic glass frit seal only.
  - Falls within MIL STD 1835 GDIP1-T14, GDIP1-T16, GDIP1-T18 and GDIP1-T20.

N (R-PDIP-T\*\*)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



- NOTES:
- A. All linear dimensions are in inches (millimeters).
  - B. This drawing is subject to change without notice.
  - Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
  - The 20 pin end lead shoulder width is a vendor option, either half or full width.



# PACKAGE OUTLINE

## NS0016A

### SOP - 2.00 mm max height

SOP



4220735/A 12/2021

#### NOTES:

1. All linear dimensions are in millimeters. Dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 mm, per side.
4. This dimension does not include interlead flash. Interlead flash shall not exceed 0.25 mm, per side.

# EXAMPLE BOARD LAYOUT

NS0016A

SOP - 2.00 mm max height

SOP



4220735/A 12/2021

NOTES: (continued)

5. Publication IPC-7351 may have alternate designs.

6. Solder mask tolerances between and around signal pads can vary based on board fabrication site.

# EXAMPLE STENCIL DESIGN

NS0016A

SOP - 2.00 mm max height

SOP



SOLDER PASTE EXAMPLE  
BASED ON 0.125 mm THICK STENCIL  
SCALE:7X

4220735/A 12/2021

NOTES: (continued)

7. Laser cutting apertures with trapezoidal walls and rounded corners may offer better paste release. IPC-7525 may have alternate design recommendations.
8. Board assembly site may have different recommendations for stencil design.

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